

Lightweight deep learning model incorporating an attention mechanism and feature fusion for automatic classification of gastric lesions in gastroscopic images: supplement

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A LIGHTWEIGHT DEEP LEARNING MODEL INCORPORATING ATTENTION MECHANISM AND FEATURE FUSION FOR AUTOMATIC CLASSIFICATION OF GASTRIC LESIONS IN GASTROSCOPIC IMAGES: SUPPLEMENTAL DOCUMENT

Table S1. Per-category classification performance of other state-of-the-art methods and our method on gastric lesions dataset

Methods	Category	Accuracy	Sensitivity	Specificity	PPV	NPV	AUC
Zhang Y, et al.[1]	EGC	96.7 (96.1, 97.3)	78.8 (74.6, 83.0)	98.9 (98.1, 99.7)	90.0 (83.3, 96.7)	97.5 (97.0, 98.0)	97.6 (97.4, 97.8)
	LGIN	90.9 (89.7, 92.1)	80.7 (78.1, 83.3)	95.7 (94.1, 97.3)	89.9 (86.4, 93.4)	91.4 (90.3, 92.5)	95.8 (95.6, 96.0)
	non-neoplasm	91.4 (90.2, 92.6)	96.5 (95.1, 97.9)	84.6 (81.8, 87.4)	89.4 (87.7, 91.1)	94.7 (92.8, 96.6)	97.0 (96.8, 97.2)
Li, et al.[2]	EGC	96.8 (96.4, 97.2)	84.7 (82.0, 87.4)	99.4 (99.0, 99.8)	93.7 (90.2, 97.2)	98.2 (97.9, 98.5)	98.8 (98.7, 98.9)
	LGIN	93.2 (92.1, 94.3)	84.4 (80.2, 88.6)	95.9 (93.6, 98.2)	90.1 (85.7, 94.5)	93.0 (91.4, 94.6)	98.1 (97.1, 99.1)
	non-neoplasm	92.9 (91.9, 93.9)	96.6 (94.4, 98.8)	87.8 (84.2, 91.4)	91.0 (88.9, 93.1)	95.1 (92.2, 98.0)	97.5 (96.8, 98.2)
Liu, et al.[3]	EGC	96.6 (95.8, 97.4)	75.9 (69.5, 82.3)	99.1 (98.8, 99.4)	91.5 (88.8, 94.2)	97.1 (96.4, 97.8)	98.4 (97.7, 99.1)
	LGIN	92.2 (90.7, 93.7)	85.9 (82.0, 89.8)	95.2 (93.9, 96.5)	89.3 (86.8, 91.8)	93.5 (91.8, 95.2)	96.7 (96.2, 97.2)
	non-neoplasm	93.1 (91.9, 94.3)	96.6 (95.5, 97.7)	88.3 (85.4, 91.2)	91.8 (90.0, 93.6)	95.1 (93.6, 96.6)	98.1 (97.7, 98.5)
Our	EGC	97.4 (96.5, 98.3)	93.4 (90.5, 96.3)	98.5 (98.2, 98.8)	91.0 (84.1, 97.9)	99.0 (98.8, 99.2)	99.4 (99.0, 99.8)
	LGIN	94.5 (93.4, 95.6)	93.0 (89.2, 96.8)	96.5 (94.5, 98.5)	95.0 (91.7, 98.3)	94.1 (91.6, 96.6)	98.6 (97.9, 99.3)
	non-neoplasm	95.0 (93.4, 96.6)	92.6 (87.4, 97.8)	93.6 (90.9, 96.3)	94.8 (89.7, 99.9)	96.8 (94.5, 99.1)	98.8 (98.4, 99.2)

EGC: early gastric cancer; LGIN: low-grade intraepithelial neoplasia; PPV: positive predictive value; NPV: negative predictive value; AUC: area under the curve.

Table S2. Per-category classification performance of other state-of-the-art methods and our method on retinal dataset

Methods	Category	Accuracy	Sensitivity	Specificity	PPV	NPV
Zhang Y, et al.[1]	CNV	95.4 (95.0,95.8)	99.1 (98.6,99.7)	94.2 (93.2,95.2)	85.0 (83.0,87.0)	99.7 (99.6,99.8)
	DME	98.1 (97.7,98.5)	94.1 (93.0,95.2)	99.4 (99.2,99.6)	98.2 (97.2,99.2)	98.1 (97.7,98.5)
	DRUSEN	95.9 (94.5,97.3)	83.7 (78.0,89.4)	100.0 (100.0,100.0)	100.0 (100.0,100.0)	95.2 (93.5,96.9)
	NORMAL	98.8 (97.8,99.8)	99.5 (99.4,99.6)	98.5 (98.2,98.8)	95.8 (93.3,98.3)	99.5 (99.1,99.9)
	CNV	96.7 (95.6,97.8)	99.6 (99.6,99.6)	96.1 (94.7,97.5)	89.0 (85.4,92.6)	99.5 (99.4,99.6)
Li, et al.[2]	DME	98.6 (98.2,99.0)	95.3 (94.2,96.4)	99.4 (99.3,99.5)	98.9 (98.3,99.5)	98.5 (98.1,98.9)
	DRUSEN	97.4 (96.3,98.5)	90.7 (86.7,94.7)	99.7 (99.6,99.8)	99.0 (98.4,99.6)	97.4 (96.3,98.5)
	NORMAL	99.3 (98.9,99.7)	98.5 (97.4,99.6)	99.6 (99.5,99.7)	98.7 (98.1,99.3)	99.5 (99.1,99.9)
	CNV	96.5 (95.4,97.6)	99.6 (99.6,99.6)	95.4 (94.0,96.8)	87.9 (84.3,91.5)	99.6 (99.4,99.8)
Liu, et al.[3]	DME	98.5 (98.1,98.9)	95.1 (94.0,96.2)	99.6 (99.5,99.7)	98.9 (98.3,99.5)	98.4 (98.0,98.8)
	DRUSEN	97.2 (96.1,98.3)	89.7 (85.7,93.7)	99.6 (99.5,99.7)	98.8 (98.2,99.4)	97.0 (95.4,98.6)
	NORMAL	99.2 (98.8,99.6)	98.3 (97.2,99.4)	99.5 (99.4,99.6)	98.5 (97.9,99.1)	99.4 (99.0,99.8)
	CNV	97.5 (97.1,97.9)	99.1 (98.5,99.7)	96.9 (96.5,97.3)	91.4 (90.3,92.5)	99.7 (99.6,99.8)
Our	DME	98.8 (98.5,99.1)	96.4 (96.4,96.4)	99.7 (99.4,100.0)	99.1 (98.4,99.8)	98.8 (98.8,98.8)
	DRUSEN	98.1 (97.7,98.5)	93.5 (92.9,94.1)	99.6 (99.3,99.9)	98.9 (98.0,99.8)	97.9 (97.8,98.0)
	NORMAL	99.4 (99.1,99.7)	98.8 (98.1,99.5)	99.6 (99.5,99.7)	98.9 (98.3,99.5)	99.6 (99.2,100.0)

CNV: choroidal neovascularization; DME: diabetic macular edema; PPV: positive predictive value; NPV: negative predictive value.

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